

CLAIMS

What is claimed is:

1. An ergonomic fish tape reel assembly, comprising:
 - a housing having a back wall and outer and inner peripheral walls extending generally axially from the back wall to define an outward facing annular cavity disposed about a central opening concentric with a center axis and bounded by the inner peripheral wall;
 - a reel handle extending from the housing across the center opening;
 - a cassette rotatably mounted in the annular cavity for rotation about the center axis, the cassette having an axially extending hub and a radially extending annular outer wall;
 - a cassette handle mounted to the cassette outer wall for manually rotating the cassette about the center axis relative to the housing; and
 - a fish tape wound around the cassette hub within the annular cavity of the housing and having one end secured to the cassette and an opposite end extending outside of the cassette through an exit aperture of the housing.
2. The reel assembly of claim 1, wherein the reel handle has a pistol grip configuration for grasping the reel assembly with a straight wrist in a generally horizontal position with the fish tape extending from the housing generally horizontally.
3. The reel assembly of claim 2, wherein the reel handle has a grippable surface at least three inches in length.
4. The reel assembly of claim 2, wherein the housing has a vertical center line perpendicular to and intersecting the center axis and wherein the reel handle essentially extends along the center line.

5. The reel assembly of claim 4, wherein the exit aperture is located at a forward side of the center line.

6. The reel assembly of claim 5, wherein the exit aperture directs the fish tape in a feed direction essentially perpendicular to the reel handle.

7. The reel assembly of claim 2, wherein the reel handle extends across the center opening in a curvilinear path.

8. The reel assembly of claim 7, wherein the reel handle is concave toward the forward side of the center line.

9. The reel assembly of claim 2, wherein at least a portion of the reel handle defines a convex surface.

10. The reel assembly of claim 9, wherein the convex surface defines a closed curvilinear path.

11. The reel assembly of claim 2, wherein the reel handle and the housing are formed as a monolithic structure.

12. The reel assembly of claim 11, wherein the reel handle and the housing are molded of an impact modified plastic.

13. The reel assembly of claim 1, wherein the cassette handle is mounted to the outer wall of the cassette to extend axially parallel to the center axis.

14. The reel assembly of claim 1, further including a retaining ring sonically welded to the housing to rotatably retain the cassette.

15. The reel assembly of claim 1, further including a retaining ring having an axially extending inner peripheral wall and a radially extending annular outer wall, the inner peripheral wall being fixedly mounted to the housing and the outer wall being disposed to overlap the outer wall of the cassette without inhibiting rotation of the cassette.

16. The reel assembly of claim 15, wherein the retaining ring inner peripheral wall is permanently attached to the housing inner peripheral wall.

17. The reel assembly of claim 16, wherein the outer wall of the cassette defines an annular recess facing outward adjacent the inner peripheral wall of the cassette in which the outer wall of the retaining ring is disposed.

18. The reel assembly of claim 1, wherein the housing defines a passageway extending tangentially from the annular cavity to the exit aperture for guiding the fish tape along a feed direction.

19. The reel assembly of claim 1, wherein the housing and reel handle are molded together of an impact modified plastic.

20. The reel assembly of claim 1, wherein the fish tape is a flat metal tape.

21. The reel assembly of claim 1, wherein the outer peripheral wall of the housing has an interior surface with at least one friction reducing member to reduce sliding friction as the fish tape moves relative to the housing.

22. The reel assembly of claim 21, wherein there are a plurality of such friction reducing members spaced apart along the interior surface of the outer peripheral wall of the housing.

23. The reel assembly of claim 22, wherein the friction reducing members are ribs formed integrally with the housing and extending radially inwardly from the outer peripheral wall of the housing.

24. The reel assembly of claim 23, wherein the ribs define a convex surface.

25. The reel assembly of claim 24, wherein the fish tape engages the ribs at the apex of the convex surface in essentially line contact.

26. The reel assembly of claim 21, wherein the at least one friction reducing member defines a contact area with the fish tape of less than a surface area of the outer peripheral wall of the housing.

27. A center handle fish tape reel assembly, comprising:
a housing defining an annular cavity about a central opening;
a reel handle fixed with respect to the housing and extending across the center opening of the housing; and
a fish tape disposed in the annular cavity and extending through an exit aperture of the housing having an inner end secured to a reel member rotatable with respect to the housing for winding and unwinding the fish tape.

28. The apparatus of claim 27, wherein the reel member is a cassette onto which the fish tape is mounted.

29. The apparatus of claim 28, wherein the cassette forms part of the exterior of the housing.

30. The apparatus of claim 29, further including a handle mounted to the cassette for rotating the cassette relative to the housing.

31. The apparatus of claim 27, wherein the reel handle has a pistol grip configuration for grasping the reel assembly with a straight wrist in a generally horizontal position with the fish tape extending from the housing generally horizontally.

32. The apparatus of claim 31, wherein the reel handle has a grippable surface at least three inches in length.

33. The apparatus of claim 31, wherein the housing has a vertical center line perpendicular to and intersecting a center axis about which the center opening is concentric and wherein the reel handle essentially extends along the center line.

34. The apparatus of claim 33, wherein the exit aperture is located at a forward side of the center line to direct the fish tape in a feed direction essentially perpendicular to the reel handle.

35. The apparatus of claim 27, wherein the reel handle extends across the center opening in a curvilinear path.

36. The apparatus of claim 35, wherein the reel handle is concave toward the forward side of the center line.

37. The apparatus of claim 27, wherein the reel handle and the housing are formed as a monolithic structure of impact modified plastic.

38. A center handle fish tape reel assembly, comprising:

a housing defining an aperture in communication with an annular cavity disposed about a central opening and including at least one friction reducing member at an interior surface within the annular cavity for abutting a fish tape housed in the annular cavity;

a reel handle fixed with respect to the housing and extending across the center opening of the housing; and

a reel member rotatably mounted to the housing to advance or withdraw the fish tape through the aperture in the housing.